

1894

1894-1

Feb. 2nd Walked in the direction of Rydal Lake.

Noticed yellow crocuses growing out of doors for the first time this year. & picked some of the budding ash-tufts.

Feb. 3rd. Noticed what a number of different leaves grow here. Some brown like dead leaves, some like miniature pine-trees, some like ferns & some like pale grey fairy trumpets. The walls were in one place covered with the Creeping lead-flax.

Feb. 5th Noticed the rocks were covered with pieces of slate. Did not know they were all made of slate. The hills opposite Loughrigg were looking lovely in the sunshine with the shadow of the Loughrigg falling upon them.

Feb. 8th A lovely day - very sunny at intervals with heavy clouds floating about, but no rain. We walked to the Skewerit falls which were very full owing to the rain. Noticed how they make use here of big slabs of stone instead of gate posts by boring holes in the sides & inserting poles in them. It is a good place as they can be easily removed when necessary.



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2. The cattails of the lakes were very conspicuous. Some of them prettily banded with red, others very long. The lichen looked especially beautiful growing among the moss on the stone walls.

I was surprised to find a red oak gall on an oak leaf remaining from last year.

One piece of rock that we passed reminded me of the caves on the Guernsey coast - it was streaked with red & yellow & the water was dripping from it; the little streams trickling from the mountains to join the Brathay river, & with ferns growing by the sides of them also made me think of Guernsey. I was glad to see old plants of heather, fox-gloves & the hills-strawberry as a promise of what the spring & summer will bring. The approach to the falls is very picturesque & the falls themselves grand.

Feb 9th - 12th Too wet to go out.

Feb. 13th I noticed the young wallers about two inches above the ground. The fox-glove plants had grown as large as a full-sized saucer. The fields were covered with the first tiny leaves of the buttercup. They ^{are} so much cut into that they can easily be distinguished from the grass & from the smooth even-edged daisy leaf which is generally to be found closely

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Feb. 14th. Very cold but fine. I saw the primrose buds just coming out

Feb. 16th A pouring wet day. Went to Stock Ghyll, which were very full. Noticed the walls of the rocks were covered with saxifrage, saxicle & wood-sorrel - all of them just putting forth their first leaves.

Feb. 19th Fine & cold. The trees on the road up to Rydal full of spring buds. The fat red buds of the lime were beginning to grow thinner & show green at the top. Noticed how only one side of the stone walls was covered with moss - sloping with the north.

Feb. 27th Lovely spring day. The schemach leaves were beginning to uncurl; the larch peruvinkle was blossoming in the Brathay churchyard, & for the first time I saw a full opened spray of laurestinus - but then that has been out for a month or more.

March 6th The weather has been so wet it has been impossible to walk out except with a umbrella & umbrella which are not favourable to finding specimens. but though it was very cold today many interesting things were pointed out to me. I saw the difference between the waymouth & leotell pine. The latter having spines growing in clusters of two, the former in clusters of five or seven.

I saw the bitter-cross
hail-cross, rus truncata
saxifrage with its little
tiny white star of a flower.

4. The black-berryed birch grows in quantities on the side of the Rothay bridge. I've gathered what we could bear of it. I was shown a wild cherry tree which looked when in bud very like the oak except that the contour of the leaf is different. The tulip tree is placed alternately with the lime just beyond Kelsick House. It can easily be recognized by its angular branches and twigs.

The American red currant was already flowering in somebody's garden. I never remember seeing it flower so early in year.

The wild sage is coming well into leaf now, & is so much like the cultivated plant that it is easy to recognize, & the Japonica's black stem is buttoned all over with its close bunches of red flowers.

March 7th The stock phyle tales were looking lovely today but not quite so free as they have been. I went right down the bottom of the steps because so many plants grow on the sheltered bank. The golden saxifrage was flowering. It has funny little misshapen flowers, & the garlic leaves were sprouting up everywhere with Cranesbill & wood sorrel but none of these are flowering yet.

Mar. 12 & 13th. Dull cold days - noticed no fresh flowers

March 14th A lovely spring day; the students came in from their walks with their hands full of celandine & coltsfoot.

The first anemone & wild primrose were found also.

The next day the students saw the crocuses come in blossom



Mar 17 to 20. A week of lovely weather. One of the students brought home branches of larch bearing the red cone shaped flower. I was taken to see the fir tree that is growing vertically on the branch of an older tree. It looks very curious & has prominently seeded cones. It is on the Rydal road. We hiked upon the wall & looked over Rydal lake for some time, & though so early in the year it was almost as warm as June.

18th Palm Sunday. The palm was blossoming very where. The students came in with their hands full.

20th Both beautiful days. I did not walk far.

22nd Walked by the Rothay & sat upon the stone wall for a long time. The air was full of spring sounds & the colors on the mountains were beautifully varied. Good Friday. For the first time I saw Nab Scar from the opposite side of Rydal Lake. It is much finer from that point. The wild ducks in the lake were very excited. We were interested in hearing the echo of the coach horn on the bridge.

24th. Every house I noticed as I walked up the street in the sunset had daffodils in the window for Easter Sunday. The hyacinths in the Hill's house were all drooping as if their day were over.

25th Easter Sunday. A most jubilant day. The early service was very beautiful; the every grave in the churchyard had upon it a cross of daffodils.

The whole air seemed to be full of them. I received the first orange blossom from the Florida grove -

6. March 27. Drove to Coniston Lake. The view of the bare rugged mountains very grand. Saw quantities of patches with red flowers. Walked from Waterhead to Brantwood. Picked violets & primroses by Ruskin's house, & the flower of the maple.

Came home by the Langdale Pikes & Goo Valley. Saw the famous yew tree which is over hundred years old. Sometimes the sides of the mountains were covered with juniper bushes.

March 28th 29th. Walked over Langdale in search of the Fern and daffodils. Found the stag's horn moss creeping on the top & lovely bunches of larch with the tiny red cones. Near a small waterfall the Hard Fern was growing, & spleen-wort.

March 30th. Found Liverwort near Fox How and the Wild Cherry tree near the Rothay. It has a very different appearance from the Wild Cherry. The leaves of the yellow poppy have grown quite large.

April 2nd. The yellow poppy plants are in bud & the maple

April 4th. flowering on the Windermere road. Some of the students have brought in the Wild Cherry in full flowers & the ash has burst into little clumps of dark purple flowers.

April 5th. The Bitter-cress in flowers - a little tiny white flowers. The lady's mantle plant developing - ground ivy in flower; springing in bud. Oser in flower. Bramble has been in leaf some days.



April 6th. The wild plum was brought indoors in full flower, & the wild raspberry. The stitchwort was found at Lazonder & the toothwort growing in a waste place on the Rydal Road.

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"Whorley" plumbago (Arch. (Prunus cap.)



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April 8th. Found the garlic well in bud. Ash in full flower.

April 9th. The Blueberry in full flower on the banks of Stock Ghyll. Crossed the stream & found quantities of wild cherry & anemones on the other side. All the fern plants were putting out new fronds.

April 10th 11th. There were quantities of dead-nettles growing in between the stones on the Rydal Road which the students annoyed me by picking - They looked much prettier growing.

April 12th. A pouring wet day. We saw a white flower with little brown leaves in Canon Bate's garden.

April 13th. The maple in flower & leaf was brought in, two kinds of spruce with new cones - a handful of Marsh Marigolds & the sycamore in flower - the Willow in seed. The hazel - blue with keys fitting tightly. on the stem is very pretty just now. The lambs are growing much prettier & may always be found on the top of very available hillside.

April 14th Very wet all the afternoon.

April 15th Found the leaves of the Columbine on the way to the moor.

April 16th Beech in flower - & Wych Elm seedling. The Horseshoe found on the way to Stock Gill.

April 17th & 18th Herb Robert, & Herb Paris in flower. The wood-saxifrage in bud & the wood-ruff in flower. Milick-grass, Blue-bell in flower. Beech-fern & oak-fern in ponds. The Beech-fern has the two last frondlets turned down in a different direction from the rest. The oak-fern curls its fronds up into three little balls before coming out. The leaf bears great resemblance to the oak. The white-milkwort & bitter-vetch were also in flower. All these were found in downland with quantities of primroses.

April 19th. Primroses everywhere. "Welcome pale primrose, starting up between dead matred leaves of oak & ash..."

I walked to Grasmere by the terrace above Wordsworth's house. The view all the way was charming. The patches of lace on the opposite side of Rydal are almost too bright a spot in the landscape. Wordsworth was not fond of these trees & has criticised them very severely. The Bracken was putting forth its fronds all over the mountains, indicating the poverty of the soil; they are rare this



year on account of the warm weather. Bracken does not like the frost; it is that which turns it brown & red in the autumn. We found the delicate Parsley fern, growing freely in the crevices of the stones. The oak-tree too was just beginning to flower.

"Those green-robed striders of mighty woods" Keats.

April 20th. Two bumble bees & two white butterflies.

April 21st. Went to Lowood. The weather lovely. The wood is carpeted with scented violets and primroses. We found several orchids & the yellow loosestrife.

April 23rd The east wind was very cold - walked by Windermere & tried to reach the Bird Cherry blossoms. The garlick is fully out everywhere. The Broom has been seen in flower for some days now.

"Twas that delightful season, when the Broom, Full flowered and visible on every steep Along the copse runs in vines of gold" Wordsworth. It is very early this year - generally I do not find it until late in May. There is very little of Colenage's "Never bloomless June" here.

April 24th. Very cold & windy on the way to Lowood - very warm coming back. The Bugle found the way to Troutbeck.

The Potentilla begins & the Cuckoo flower also brought in. Cuckoo Pint, or Arum or Lord's & Lady's has been flowering for some time but I only saw it today.

Someone heard the Cuckoo, but I have only distinguished larks at present. Water Avens was brought in to day but it has been flowering here before. Mare's tails are springing up everywhere - but I do not like them.

April 25th 26th 27th. Fine days but a very cold east wind.

The Sea-pink is flowering among the marsh marigolds on the borders of the lake & we picked great bunches of Crab-apple today.

April 25th 26th 27th. Fine days but a very cold east wind.

The beautiful yellow globe flowers are growing in clumps on the stones in the meadows & by the borders of the streams & yellow Welsh poppies are opening by the road-side. We found a pretty red & yellow oak apple -

May 1st. Today we were startled

by hearing a lone tortoiseshell among the spars in a lime tree on the way to the Noak. A rascal ran up behind us & told us with much excitement that a hawk was carrying off a young bird.

Later on we found a black bird's nest in a very low shrub in the Noak with one egg.

Which we did not take, but I intend to catch it.

The Noak was breathing the very essence of spring. The slopes were covered with bluebells & violets & all the ferns were unfolding their fronds.

The Hyacinth did not at all keep up the reputation which one of the

poets has given it;

"The melancholy Hyacinth that weeps All night & never lifts an eye all day"

but it may have been the effect of the sunshine.

(The first of May.)

May 2nd A very wet day.

The Lady's mantle in flower

May 3rd. Found the Water crow on

the way to Monk's Crag - We found quantities of london in flower. but as it was very cold & raining poring I did not connect it with what Wordsworth has said

"Twas that delightful season when the London,

full flowered & visible on every steep

Along the Copse runs in veins of gold".

The Cinnamander spiculosa has been out for many days & is beginning to carpet the banks.

May 4th. Sunday - went to church in Macmillan's.

May 5th 6th. Showery days. Nothing new was brought in.

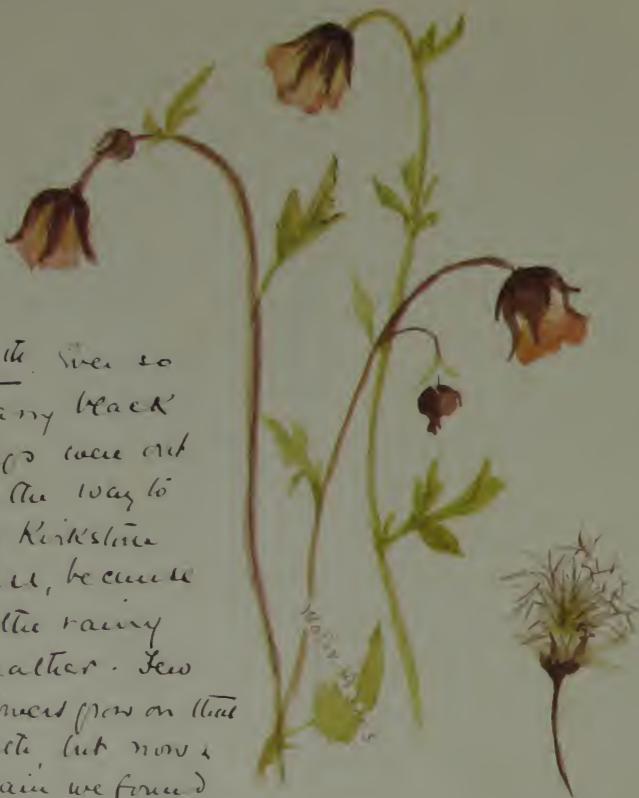
May 7th. The pretty pink honest found on the Whidernoe road, & the oak-trees are covered with currant galls - last year all the galls were sprangled - Lubbeck pointed out their accumulation of galls in the oak.

May 8th 9th. Still showery but very fine in the afternoon. Quantities of copper beech, crab-apple, blossom & marsh marigolds - a tall yellow cross called Water cross. because the leaves are used for a washboard during the winter. Red Sorrel in flower & the Roman tree



For every sprout & flower to defend it & keep it in top of spirits

May 10th 11th 12th 13th 14th 15th 16th 17th 18th 19th 20th 21st 22nd 23rd 24th 25th 26th 27th 28th 29th 30th 31st 1st 2nd 3rd 4th 5th 6th 7th 8th 9th 10th 11th 12th 13th 14th 15th 16th 17th 18th 19th 20th 21st 22nd 23rd 24th 25th 26th 27th 28th 29th 30th 31st 1st 2nd 3rd 4th 5th 6th 7th 8th 9th 10th 11th 12th 13th 14th 15th 16th 17th 18th 19th 20th 21st 22nd 23rd 24th 25th 26th 27th 28th 29th 30th 31st 1st 2nd 3rd 4th 5th 6th 7th 8th 9th 10th 11th 12th 13th 14th 15th 16th 17th 18th 19th 20th 21st 22nd 23rd 24th 25th 26th 27th 28th 29th 30th 31st 1st 2nd 3rd 4th 5th 6th 7th 8th 9th 10th 11th 12th 13th 14th 15th 16th 17th 18th 19th 20th 21st 22nd 23rd 24th 25th 26th 27th 28th 29th 30th 31st 1st 2nd 3rd 4th 5th 6th 7th 8th 9th 10th 11th 12th 13th 14th 15th 16th 17th 18th 19th 20th 21st 22nd 23rd 24th 25th 26th 27th 28th 29th 30th 31st 1st 2nd 3rd 4th 5th 6th 7th 8th 9th 10th 11th 12th 13th 14th 15th 16th 17th 18th 19th 20th 21st 22nd 23rd 24th 25th 26th 27th 28th 29th 30th 31st 1st 2nd 3rd 4th 5th 6th 7th 8th 9th 10th 11th 12th 13th 14th 15th 16th 17th 18th 19th 20th 21st 22nd 23rd 24th 25th 26th 27th 28th 29th 30th 31st 1st 2nd 3rd 4th 5th 6th 7th 8th 9th 10th 11th 12th 13th 14th 15th 16th 17th 18th 19th 20th 21st 22nd 23rd 24th 25th 26th 27th 28th 29th 30th 31st 1st 2nd 3rd 4th 5th 6th 7th 8th 9th 10th 11th 12th 13th 14th 15th 16th 17th 18th 19th 20th 21st 22nd 23rd 24th 25th 26th 27th 28th 29th 30th 31st 1st 2nd 3rd 4th 5th 6th 7th 8th 9th 10th 11th 12th 13th 14th 15th 16th 17th 18th 19th 20th 21st 22nd 23rd 24th 25th 26th 27th 28th 29th 30th 31st 1st 2nd 3rd 4th 5th 6th 7th 8th 9th 10th 11th 12th 13th 14th 15th 16th 17th 18th 19th 20th 21st 22nd 23rd 24th 25th 26th 27th 28th 29th 30th 31st 1st 2nd 3rd 4th 5th 6th 7th 8th 9th 10th 11th 12th 13th 14th 15th 16th 17th 18th 19th 20th 21st 22nd 23rd 24th 25th 26th 27th 28th 29th 30th 31st 1st 2nd 3rd 4th 5th 6th 7th 8th 9th 10th 11th 12th 13th 14th 15th 16th 17th 18th 19th 20th 21st 22nd 23rd 24th 25th 26th 27th 28th 29th 30th 31st 1st 2nd 3rd 4th 5th 6th 7th 8th 9th 10th 11th 12th 13th 14th 15th 16th 17th 18th 19th 20th 21st 22nd 23rd 24th 25th 26th 27th 28th 29th 30th 31st 1st 2nd 3rd 4th 5th 6th 7th 8th 9th 10th 11th 12th 13th 14th 15th 16th 17th 18th 19th 20th 21st 22nd 23rd 24th 25th 26th 27th 28th 29th 30th 31st 1st 2nd 3rd 4th 5th 6th 7th 8th 9th 10th 11th 12th 13th 14th 15th 16th 17th 18th 19th 20th 21st 22nd 23rd 24th 25th 26th 27th 28th 29th 30th 31st 1st 2nd 3rd 4th 5th 6th 7th 8th 9th 10th 11th 12th 13th 14th 15th 16th 17th 18th 19th 20th 21st 22nd 23rd 24th 25th 26th 27th 28th 29th 30th 31st 1st 2nd 3rd 4th 5th 6th 7th 8th 9th 10th 11th 12th 13th 14th 15th 16th 17th 18th 19th 20th 21st 22nd 23rd 24th 25th 26th 27th 28th 29th 30th 31st 1st 2nd 3rd 4th 5th 6th 7th 8th 9th 10th 11th 12th 13th 14th 15th 16th 17th 18th 19th 20th 21st 22nd 23rd 24th 25th 26th 27th 28th 29th 30th 31st 1st 2nd 3rd 4th 5th 6th 7th 8th 9th 10th 11th 12th 13th 14th 15th 16th 17th 18th 19th 20th 21st 22nd 23rd 24th 25th 26th 27th 28th 29th 30th 31st 1st 2nd 3rd 4th 5th 6th 7th 8th 9th 10th 11th 12th 13th 14th 15th 16th 17th 18th 19th 20th 21st 22nd 23rd 24th 25th 26th 27th 28th 29th 30th 31st 1st 2nd 3rd 4th 5th 6th 7th 8th 9th 10th 11th 12th 13th 14th 15th 16th 17th 18th 19th 20th 21st 22nd



May 10th. We saw many black sheep out on the way to the Kirkstone Pass, because of the rainy weather. Few flowers grow on the pastures but now, again we found patches of cuckoo flower & marsh marigolds. Some of the students brought in the Mountain Penny & Mountain Primrose, as well as the Red and Purple Sorrel.

May 11th Whit Saturday. A lovely day, but very windy. Walked by Windermere but did not go far enough to find any specimens.

May 12th Sunday. Very bright in the morning, but cloudy in the afternoon. We found quantities of stitchwort, meadow grass in the little caps by Windermere.

May 13th. A pouring wet day. We were too busy to go out for a walk even if it had been fine.

May 14th. We trespassed in some fields opposite Springfield & found the clover in flower. There is a nice terrace at the top but there were people there so we could not walk on it.

May 15th. Very showery & windy. We all went out in macintoshes again.

May 11th The hills.

Hills were growing in meadows at Stockgill & the cock's foot was in seed. The mare's tail was in flower and the water avens were growing in big clusters by the banks of the streams & the meadow grass was very abundant. The cow-wheat was found in flower for the first time.

Behind Springfield we found some rocks perfectly covered with wild hyacinths. A little way off they looked like a shadowy blue cloud. The bare rocks peeping through the soil; the bright green of the ferns beneath & of the oaks overhead made a lovely picture. Some of the students brought in the Yellow Rattle and the Brook-Saxifrage found on the way to Brathay church. The Scotch Pine is in flower. It has stiff yellowish flowers that already show they are going to turn into cones. These are generally in pairs above the shoots of the year. It is sometimes spoken of as "the gloomy Pine" in company with "the bonnie birch."

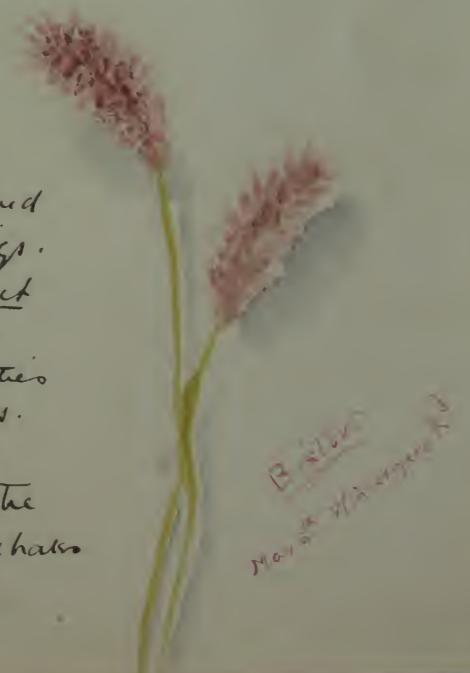
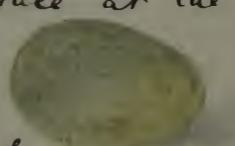
"The Pine is King of Scottish Woods
And the queen - ah! who is she?
The fairest form the forest knus -
The bonnie birch tree."

May 17th.

A lovely spring day. We went to the top of Long Rigg & found over so many things. First the fragrant Mountain Fern growing in quantities near the streams.

It is so called on account of the sweet odors it exhales when crushed.

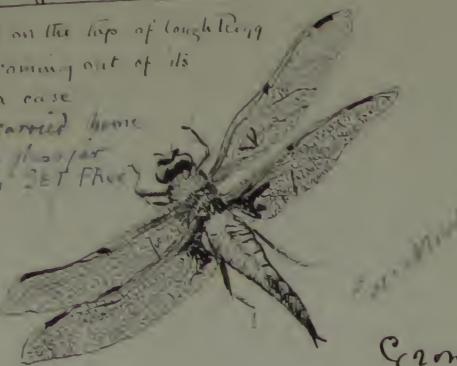
Horse-tail, Stockgill May 11th
Lippea, etc.



April 1862

Cordulegaster annulatus

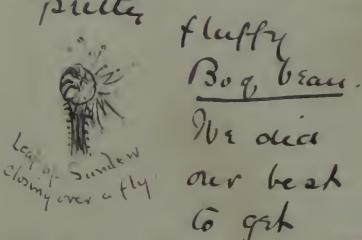
Found on the top of Long-leaved
just coming out of its
earthen case
and carried home
in a glass jar
then set free



At very little farther we found
the little mountain primrose
& the Butter work (Linaria vulgaris)
The leaves grow in a spreading
leaf, & are incurved at the edges
& covered with a greasy matter.
As they are yellowish in colour
this may account for its name.

Growing in the same place was the
little pink mountain Primrose & quantities of
louse-work. We found the sun-dew in the same boggy
ground - but it is very small at present. (Drosera rotundifolia)
Darwin found that a fragment of cotton weighing $\frac{1}{6000}$ of an oz.
was sufficient to cause
the red hair-like
tentacles to bend.

On the tops of Long-leaved
we found a
little tan
full of the
pudder



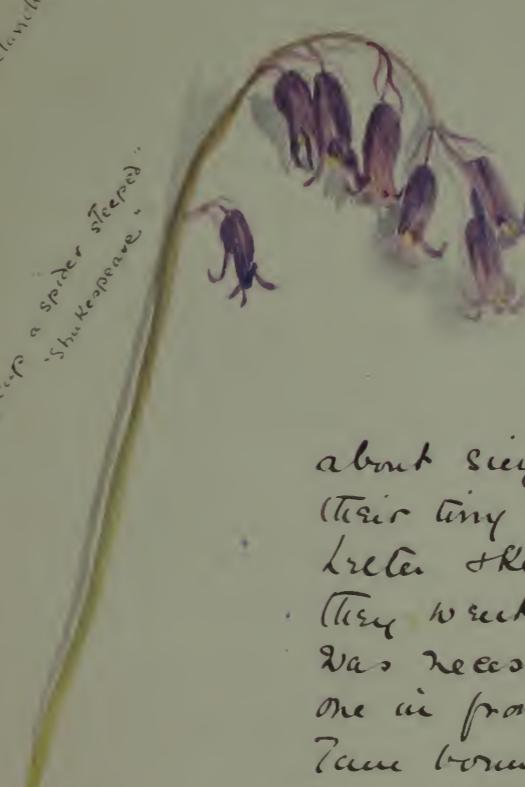
Some, but
the pond was
full of holes
with deep holes between
to turn the bog-bean
in remain & furnish
scarcity from the rains

(Melampyrum pratense)

Con. heat
May 1862

of the House of
Education.
We thought of
filling up the
holes with some

The Melampyrum pratense
Ambleside May 1862



of the loose stones
(that were lying near
but the first one that
we lifted caused
such fearful destruc-
tion among the ants
beneath that we had
not the heart to try
any others. The ants
were the same brown kind
& at once began carrying
about sieving their white eggs with
their tiny little pincers & pushing them
here & there out of sight. Sometimes
they went a long way farther than
was necessary, turning & pulling
one in front & one behind - occasionally
turning round today, pulling different
ways, but never ceasing from their
task, until every little white larva was safely
hidden from our view. I wish we could have followed
them farther. After that we made no more observations
but came down the mountain - only stopping
to gather crab-apple blossoms & to notice the
maize & lady fern - & blue & white milk-work

May 18th A lovely day - I went toward Dentmoor Crags
& gathered many flowers, but found nothing
fresh.

April 1862

May 14th. Went out on the top of Lang Rigg above Croft. Mrs Fletcher taught me the names of the mountains in the direction of the Langdales. We found quantities of parsley fern growing in bright but heavy green masses.

May 20th Sunday - Snowy in the afternoon.

May 21st. Still very cold - The pink columbine found red in Lowood

May 24th. Went for a row on the lake & saw a heron flying from one shore to the other.

May 25th. The white hulse found.

May 26th. Very snowy & cold.

May 27th-28th. Good King Hall, a green plant with a tall spike growing on waste ground.

May 31st. A delicious warm day. We went on the lake in the afternoon because it was the day before the botany, but I remember now that was last week. Nothing particular was brought in.

June 1st. Such a beautiful day. We steamed to Lake side by the £. 35 - most thoroughly enjoying the view. The trees on the opposite side of the lake are like Thames trees.



Good King Hall

1918 pnewt2
We were rather cold on the steamer & I was a brass band came the German nation. We went to Furness train, & some of us delighted to see Country again. more than six months now, since I have seen the horizon. We thoroughly enjoyed the Abbey, but I must only mention the plants we found in a Natural History diary. They were -

Hawk-weed. Belladonna -
Cross-wort - (Yellow Bed straw)
Sea-pink. White Vetch.
Mr. red Daisy. Hand orchis.
Large flowering Bitter-cress.

June 2nd A very wet day. We went to Stock Ghyll. It was more lonely than ever after the rain & the ferns had grown tremendously since I last went.



11/20/1916

June 3rd Still pouring - I went half way up to Denton's Crag to find watercress. We did not find any - because I went the wrong way but the misti rolling down the mountains were beautiful. In the evening we went to Brathay church. It is covered on the outside with black ^{green} spearwort. There is so much it spreads its arms over the stones in such a way that it looks almost like a green star-fish.

There were still some globe flowers out.

June 4th I went with my mother to Rydal Lake. It was very peaceful & subdued - but I prefer it in the sunshine.

June 5th very wet. We went a little way up Loughrigg, the swamps were almost ponds & the brooks & springs were in a tremendous hurry. They have so much work to do this weather.

June 6th. We all had a half holiday because it was such a lovely day. I drove with my mother to Elter Water village. A quaint little place built on the shores of the tiny lake & within half a mile of the Langdale Pikes. We stopped at Skelwith Force on the way back; the left bank was covered with globe flowers which were as usual out of season. I could only find the ragwort



11/21/1916 19



Dragon fly
found swimming
from its Pupa-
case.

on the right bank.

June 7th Scrambled about in the wood - found no fresh specimens but enjoyed the view immensely. Some bluebells this week found two new kinds of wild roses.

June 8th. Went on the lake.

June 9th. Went to Grasmere in a charabanc. 8 of us. Some of them went on to Lodore - a lonely little farm hidden away in the mountains. Coming back we found many forget-me-nots.

June 10th more rain & more & more.

June 11th Went to Borrowdale & back by steamer. but there were no natural history specimens there except human ones.

June 12th. Scrambled about Loughrigg trying to photograph the sheep there. Found some parsley fern - pink primroses & butter-wort.

June 13th Went to Scaudale
Bridge by the Beck.
Jumping over the stones.
We found lovely meadows
Crane's bill growing in
profuse clumps by the stream
& farther on the finest
globe flowers I have seen.
Farther still & on the boggy
banks very fine mountain
primroses, & butter-wort as
well as purple orchises and
many butterflies - meadow browns
fritillaries, orange-tips etc.
We soon arrived at Scaudale Bottoms
which runs into Sheep. fields.
It is a very lonely desolate place
hemmed in on either side by
nugget mountains devoid of herbage
& bounded at the end by Dove Craggs.
There was no sound but the
bleating of many sheep & the
ripling of the different streams
that unite to form the Scaudale Beck.
We scrambled over Dove Craggs
with great difficulty - it was
very lonely on the top & we tried

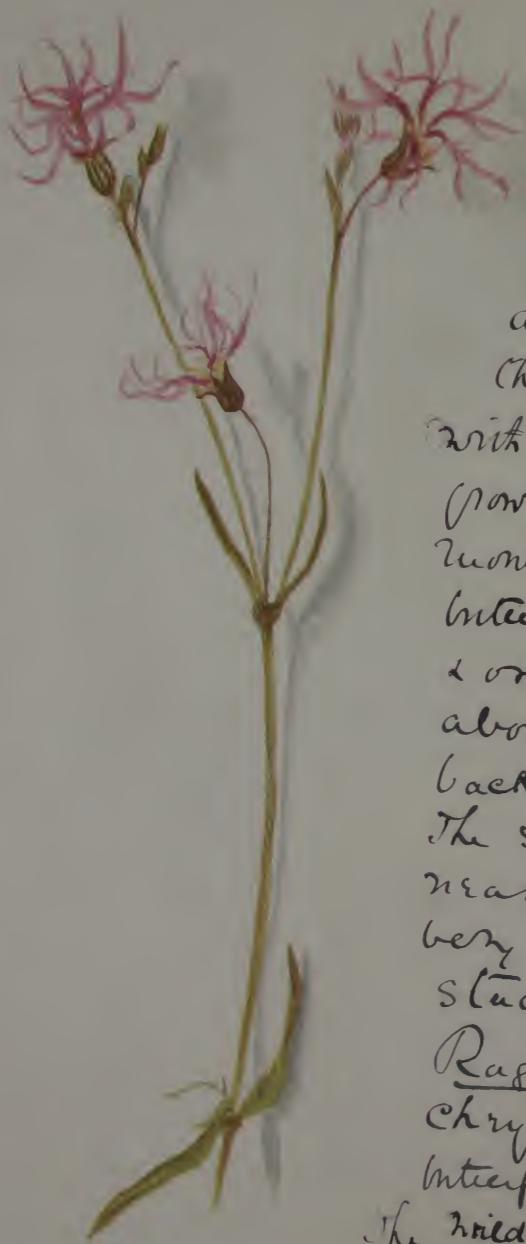
11 p.m. - June 16th

many peaks before we came upon the Scaudale valley
(that leads down to Brothers Water. On the top of the
Craggs we found a great deal of crystal which we
put in our pockets. The view was so magnificent
I shall never forget it. We scrambled down
the precipitous rock which is covered with bilberry
& had some horrible unbaked tea at the
B. Water inn.
Last coach so by
we had to trudge
Its aspect is
meaning & we were
and houses again
Ambleside in the
June 14th We did not attempt
having done so much the
we managed to get as far
& came back by steamer from
It was a very hot afternoon.
Poured its rays upon the wood -
glades on the slope were in flower
of them I have seen elsewhere - The path was covered
with flowers of all kinds - fragrant & columbine
among them - a few wild roses, numbers of ferns.
There were quantities of insects too, humming & buzzing
& crawling - in fact we found two sun-birds on the
top of Dove Craggs. As we neared Troutbeck we saw
a great deal of shining Crane's bill adorning the
red stone walls.

12 p.m. - June 16th

June 15th. Very wet.

June 16th Piper. work, Red roses & ox-eyed daisies
& yellow flag brought in from Ferry.



June 18th

Hand orchises found near Swedens bridge. The bogs on the banks of Scandacee Brook are full of interesting things. They are covered with bushes in which poor large specimens of mountain primrose & bellflower, cuckoo flower & orchises - also flags abounded there. Coming back we saw a Lark. The singing of the thrushes near the brook was very sweet. The other students brought in Ragged Robin and the chrysalises of the peacock butterfly hanging from nettles. The wild Thyme, easily recognized by its strong sweet scent was

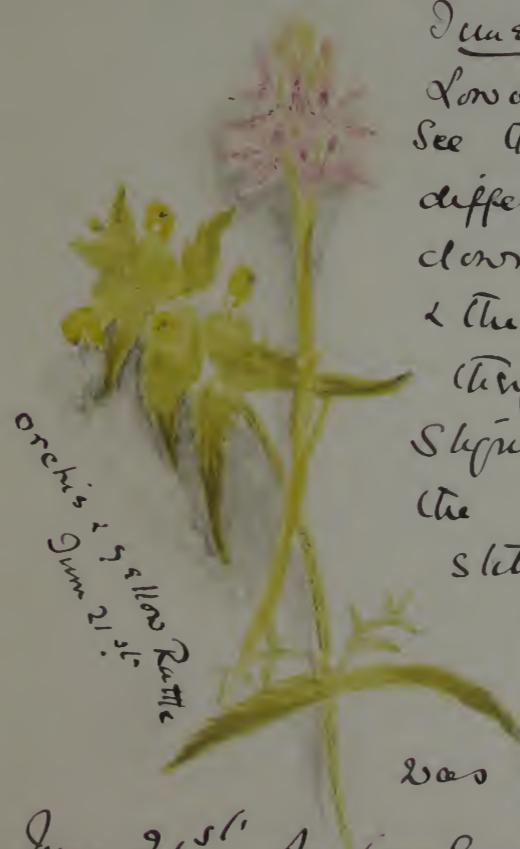
growing among the stones in the wall, & the green bank below was carpeted in many places with the Lesser wood-saxifrage. The sun was having a splendid ride off mountain's little Murray flat.

June 19th. Water-skaters seen on the Brantley - & Arctic-flax.

June 20th Gathered Foxgloves at Lonaad. In one plant we could see the stamens in all their different stages. The flowers down close on the stalk were fertilized & the anthers burst. higher up they were just bursting & the Stigma had lifted itself above the reach of the pollen; higher still they were big & fat quite tight with pollen. The Spear-work buttercup was found by some of the others.

June 21st A lovely day. Yellow flag & sheep's fescue found by Skelwith Falls.

Several ripe wild strawberry have been brought in as great prizes for painting.



June 22 23 24-25.

Wet days on the whole
Nothing particular
brought in.

June 26. Very hot indeed.

We harked in the
evening about Long
Rigg. In the first
bag we found the
rather creamy white
Butterfly Orchis &

The Sweet-smelling Orchis.
The Bog Asphodel was
just out, showing one little
slimy yellow
flower on its
leaf from stack.

The little brown
heath butterflies had
all gone to sleep
on a rush or spray with
their wings forward.
A little further up by a very tiny heath
we found some viviparous grass, that is
grass which has sprouted from new
grass out of its own leaf upon itself.

By the edge of the lake we saw quantities
of mudew & one plant was busy eating
a little heath moth struggling in its
clutches; a companion moth was
already dead & the ants were devouring
what the mudew could not digest.

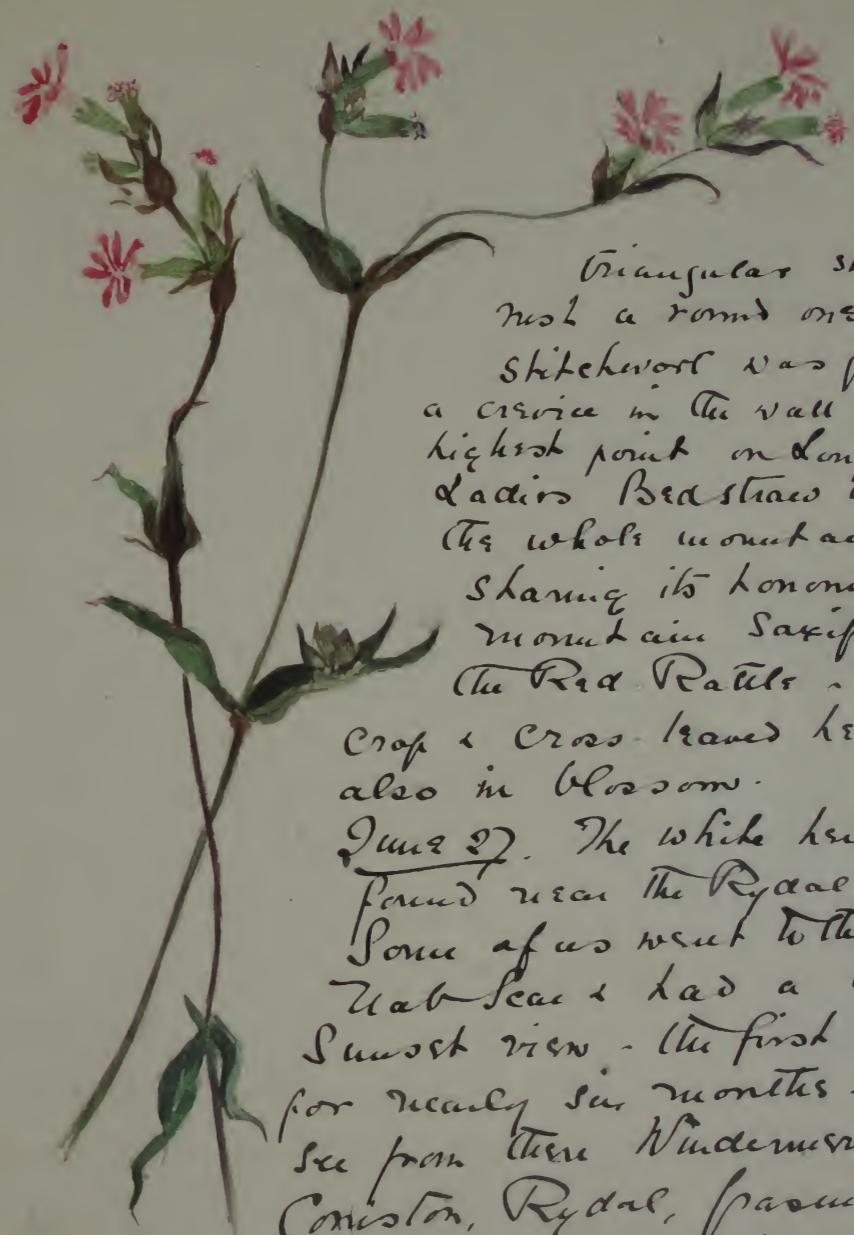
We found the Juncus Squarrosum and
I found that a sedge always has a



viviparous grass growing on
Long Rigg



Wall lettuce



triangular stem, & a
not a round one. The smaller
stitchwort was growing in
a crevice in the wall in the
highest point on Long Rigg.
Ladies Bedstraw was carpeting
the whole mountain a little
sharing its honours with the
mountain Saxifrage and
the Red Rattle. White stone-
crop & cross-leaved heath were
also in blossom.

June 27. The white herb Robert
found near the Rydal Fells.
Some of us went to the top of
that peak & had a beautiful
sunset view - the first I have had
for nearly six months. We could
see from there Windermere, Lake
Coniston, Rydal, Grasmere & cascade

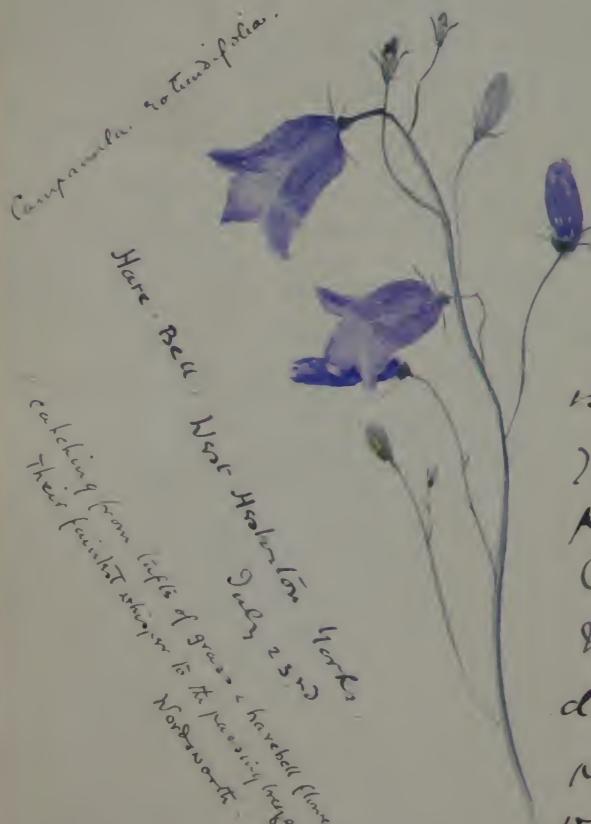
Lakes. June 29. Went out determined to find
some living objects but though we hunted
diligently in the Rothery we came back un-
rewarded. There were only water skaters to be seen.

1192 pp. 1162

The Water dropwort was in flower - & the Meadow Sweet - we found also were white Herb Robert growing near Fox Howe - we turned over a stone & noticed the coral root of the wood sorrel.

July 2nd The Burnet in flower. More meadow Sweet in the field between Windermere upper & lower Roads. Fig. work found growing on a wall on the lower road.

July 3rd Copyright St. John's Wort.



monks in at Mylrum just adds the touch of humanity which is needed to link God, Nature & Man.

1192 pp. 1162

The heather was out near Keswick & quantities of Ruehmann's Nightshade lined the road to the Falls. I shall never forget a lecture of Prof. Ordway in which he told us that the Madonna Lily is a descendant of that insignificant little flower. The Rock Rose was growing a little farther on - on the road to the ~~limestone~~ Stone. No one seemed to know exactly how it had got into that position - possibly in the glacial period I suppose. We walked round it & admired the lovely valley that leads into Buttermere - the burn very busy below cutting down fine trees which ~~they~~ were evidently going to float down the stream. Coming back we made our driver stop & gather bunches of heather - it will keep a long time in water. Just before we reached Buttermere we stopped at a little wayside inn to water the horses & were entertained all the time watching the swallows in the roof - feeding their young. Two little birds in one nest never shut their mouths at all. There was just room for their two heads in the entrance to the nest & they remained there with wide open yellow beaks all the time we stayed - sleeping them occasionally when the inopportune parent birds brought them an insect.

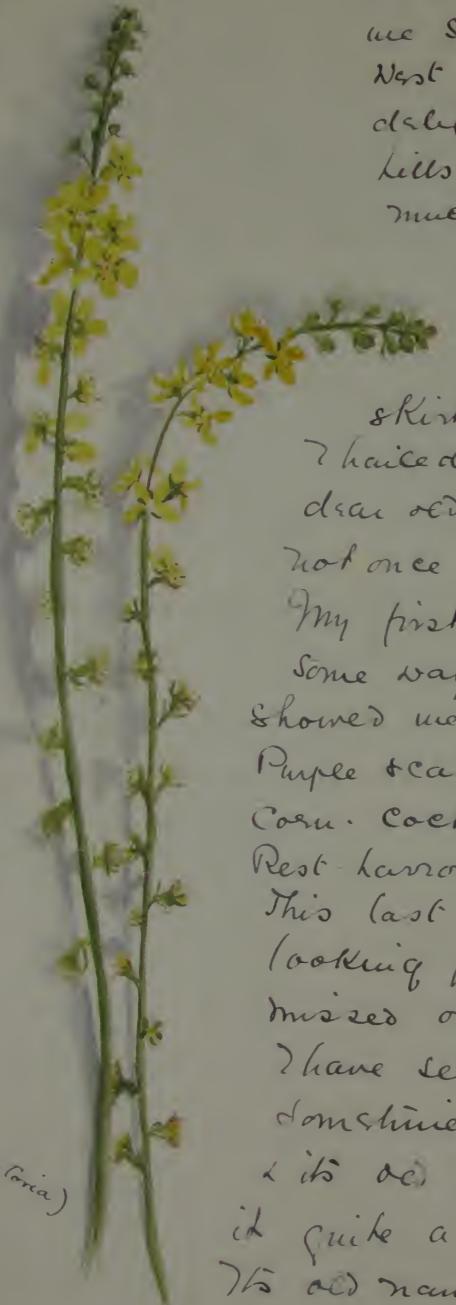
July 21st My last summer day in
Humbeshire. As the train carried
me straight across country from
West to East I was really
delighted to lose sight of the
hills which had shut out so
much of the sky & got into
the undulating wolds &
woods of Yorkshire.

Yellow corn-fields began to
skirt the line & among them
I hailed with great pleasure the
scarlet & scarlet Poppy - that I had
not once seen in Westmoreland.

My first walk on the wolds
some way between Scarborough & York
showed me quantities of new July flowers
Purple & scarlet, bellflowers, red-weed
Corn-cockle, purple Campanula -
Rest-harrow - & Yarrow or millefoil.
This last tough & rather ordinary
looking plant would be sorely
missed on our road. Sides for
I have seen it in the distance
sometimes like a shower of snow
& its old associations make it
is quite a romantic admixture.
Its old names are the "soldiers

Norman-work" & "knight's millefoil" & many a man
used to be taken from the battlefield into the

Agrimony.
Agrimonia eupatoria
Rosaceæ.



monastery to have his wounds dressed by yarrow-herb.
The corn-cockle seems to be exceedingly common in
Yorkshire - the long green spikes of its calyx make
it very conspicuous.

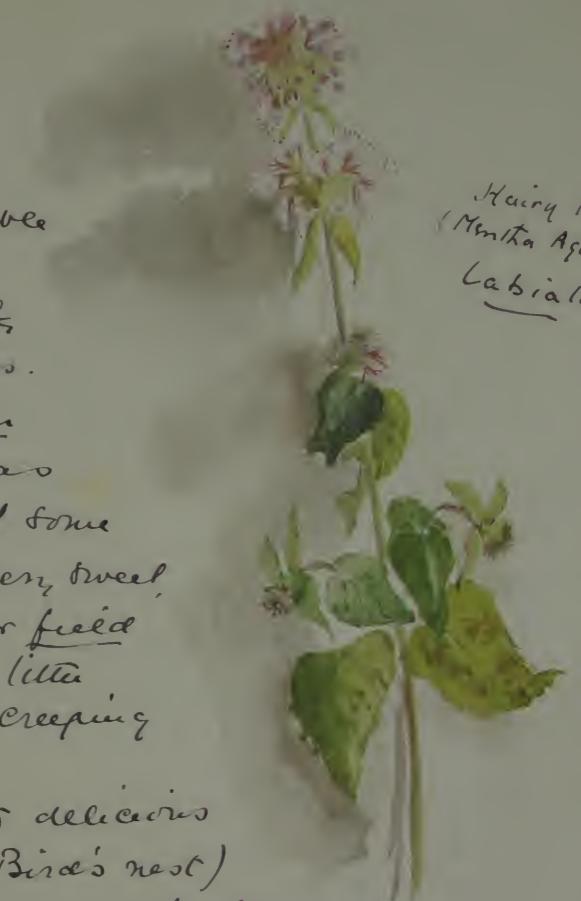
The lesser bindweed
(*Convolvulus arvensis*)
was very plentiful in
the loose sandy parts
& must give much trouble
to the farmers from the
way in which it tightly
enlaces the corn stalks.

The tall white campion
(*Lychnis herpertia*) was
beginning to seed - but some
blossoms were still very sweet
& the scorpion grass or feather
moss - ear with its little
tiny blue eyes was creeping
among the furrows.

The Corn-mint with its delicious
scent, wild-carrot (Bird's nest)

& Common chickweed & oxalis higlos
were all plentiful - though probably hardly
welcome to the agriculturist. & the dear little
scarlet pimpernel was there to tell me the weather
once more. This bright little plant with its yellow
anthers was much used once upon a time by ancient
leeches. On the moors the fire-leaved heather,
(*Erica cinerea*), bearing its bells in clusters on the top

Hairy Mint
(*Mentha aquatica*)
Labiatae.



39
of the strud-robin, was coming into blossom & the bee-keepers were beginning to think about taking their hives from the valleys to get the rich moor honey.

" Those wastes of heath
Stretching for miles to here the bee
Where the wild bird on pinions strong
Wheels round & pours his piping song,

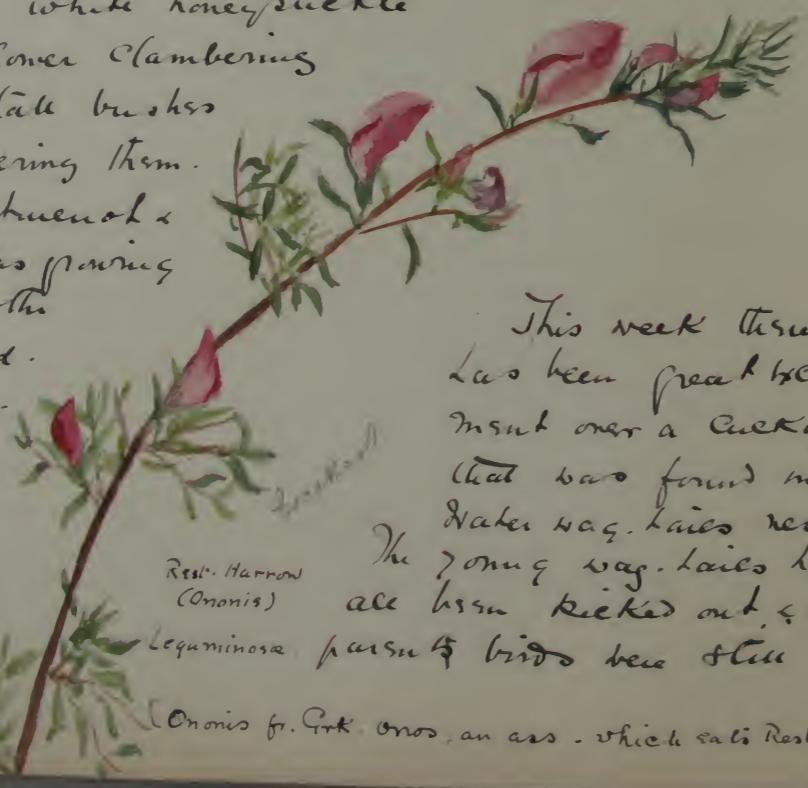
And timid creatures wander free.
The bird feeds on the young shoots & seeds of the heath
But man makes from it ropes & in the Hebrides bundles
of heath-sticks are laid across the stream, a bold arm
of stones with the top of the heath toward the current
forming a net towards which the salmon drive their
prey of fish. There are ^{in 800 miles} five kinds of heath. ^{of them}

July 22 - 31st I have been out for several weeks this week
I find that the same flowers repeat themselves in most

of the district. In a glen on the way to
the moors the white honeysuckle
was in full flower clambering
heavily over late bushes
& completely covering them.

The water forgetmenot &
willow-herb was growing
on the banks of the
streams we passed.

I saw no butter-
flies but the
little blue ones
& these only
occasionally.



Ononis fr. Grk. onos, an ass - which eats Rest-Harrow

feeding the intruder under the
impression that he was a crow.
The bird had grown quite fat &
big & looked very much like a
young hawk. He puffed himself
up beautifully. Then we traced
him ruffling all his feathers &
looking as if he would annihilate
us if he could. He had an enormous
appetite requiring to be
fed on hard-boiled egg or meat
every half hour. If we forgot
he chirps miserably.

July 30th Tuesday. I went for

a little store & brought
home thirty specimens of
flowers. The white campion
& poppies grow very fine
here even by the roadside.

I can gather the most lovely
things in ten minutes.

Aug 1st Saturday again - on the moors.
I feel quite sorry to see how
autumnal every thing looks
already. The fields are half
emptied of corn & all the
wild flowers have lost their
first beauty & look worn-out.
The moorlands however are perhaps
at their best - being covered



32

with great patches of sea-lavender
The clusters of pale blue flowers
accord well with the rather sad looks
of an east coast tidal scene.

Aug. 29. The Sea-starwort is just coming
into blossom - it looks very much
like the Michaelmas Daisy but
not so fine. I spent several hours
on the marshes this morning.
The tide was just going down
leaving everything damp & smelling
of salt. I sat on the sea-wall
in the hot-sunshine & listened
to thousands of grasshoppers in
the coarse grass. On one side of
me was the river stretching away
into the sea - on the other the re-
claimed saltmeadows - covered with tiny
sea-flowers - grass-wort etc. growing on
the edges of the
stagnant f
of water - Too bad to show
mixture of
fresh & salt;
& visited by
flocks of rooks & sea-
ulls. Hundreds of little
blue & brown butterflies were
flitting about quite tame so
that I cared easily have caught them

Per _____

*From Hampshire
Ericaceae*



21 p35 pnew162 27

& every now & then a handsome
but ill-tempered darter by. The Red
Admirals seem to frequent gardens
more than the marshes. I only
saw one pea-cock.

The ditches on the way home were
bordered with ~~weak~~ very fine yellow
toad-flax & willow. herb, growing
among the black-berry bushes
& hips & haws. Moor-haws & water-rail are very
commonly met with here - whiles & when I was
sailing last week I noticed two herons & some
wild duck. I have often seen the latter flying
over our house.

Sep. 1. Partridge shooting. The birds are very plentiful
this year & do not seem wild. We picnicked under
the elms by the side of a creek of the river & went
home laden with the poor little dead birds.

The Black berries are still all red & green.
Sep. 4th Today we had another picnic under the oak trees
that grow by the river & amongst rank tufts of
goose bushes & brambles. The goose is very easy
to pull out of the ground & makes capital firewood
if it is dead & dry. The yellow toad-flax grows
among it to the height of five or six feet & a
little pink flower of which I have not yet found
out the name, grows to profusely in many places
that it forms quite a mat. The persicaria is
very plentiful there too. We made a lovely pygmy
fire & had big apple-puffs & tea & cake.



Scared from the garden
from the garden

See fluttering about the meadows

Fritillary

I found several kinds of
mint but cannot yet dis-
tinguish them.

Sep. 8-20th We have all been
astonished this year at the
numbers of big "Daddy long legs".
Just outside our gate in the short
coarse sea grass there are millions.
The ground is alive with them
& so it is every where in the meadows.
The grass-hoppers too seem much more
numerous than usual & there are thou-
sands of small Heath butterflies - and
Red Admirals. I have noticed the
latter frequent the dahlias & mulberry
tree & seem altogether much more at home
among cultivated flowers than the small
inconspicuous butterflies. Possibly they
feel more fitted in this gorgious raiment.
The tamarisk is just coming out in all
its glory - I do not know that this is a native
wild flower or whether as some say it has been

Chicory is cultivated as a salad
but more frequently for the sake
of its roots which are roasted
& mixed with ground coffee.
Endive is a kind of Chicory.]

introduced from Germany
but at any rate it taken
kindly to English soil &
has done so for many
years for in
Bronnes Pastoral

we find
"among the
rest the tamarisk
there stood

for his dove's
becomes only known
most good"

for it used to be used
for broom-making.
It is sometimes known
as the sea-cypress

"On rough crag
Where the wild tamarisk whistles
to the blast.

The swallows ought to have all
gone by now. but I saw some
today (Sep. 20th) Yesterday a robin
perched on the garden chair next to
mine & gave me a song.

(*Cichorium intybus*)
Wild Chicory or Succory
N.O. Composite
Picked on Hampton Banks
Farnham 1867





From memory - body done.
on the Essex marshes

Oct. 1. At Ambleside again. The country looks lonely in its autumn aspect. In the morning it is very cold & misty - almost foggy. Later on the sun bursts out & makes everything warm & yellow. Fairfield Basin is more beautiful than ever. Many flowers are still in bloom here that have finished flowering in trees; honey-suckle, stitchwort the lesser, goldenrod, water dropwort, brooklime, moneywort, red campion, striped veronica, wild mint, ox-eyed daisy, burnet, wood betony - yellow balsam & ladies mantle - The leaves of the latter have turned a lovely green red.

Oct. 2nd Today we scrambled about the moor & found a good many fruits. The big hogweed, the angelica - the latter can be distinguished by its dark red stem - smooth near the root.

The few remaining blossoms were of a beautiful delicate white & pink. The end-weed was in flower - but it has to be closely inspected to be appreciated - we found numbers of sweet sheep's-ear as well as Devil's-bit - The feeder -

Rose berries were very juicy & bright & picked quantities of long sprigs of burdock. We found specimens of the lady, male & mountain blue birds.

Oct 3rd Several of us went for a long walk on Longrigg Terrace.

Rydal Lake was looking as calm & still as on last Good Friday & Nabs Scar was most beautifully reflected in it. As we approached the corner that leads to the first "Rest" & the "thankful" seat, we found



34 A delicious mossy bog covered with the Grass
of Parnassus.

flowers
and stamens
golden
from the
species

It is a
most beautiful
of the Alps.

of Asian Asia.

The Bay Asphodel
of such lonely
deep red as
grew to
one clump
pine forest.

The Silvery Saxifrage

were to be found in
just as we turned
of grassmen resting
in the protecting
view & away in the
was the road to Kes.

through the hills between the "lion & the lamb" on the left
& Great Sandal on the right. They were beginning to



It was the first time I
had seen the little delicate

with its dark veined petals
commonly called the Snow
Candlersicks. It is so called
myth that the most beautiful
were found on Parnassus.

native of the
of Britain.

of S. Europe

We also found
in seed and mosses
Colours, a bright
pale green - & they
luxuriantly that
was like a miniature

and the Cotton Grass
the same bog.

The corner the Lake
just where it ought to
mountainous bush upon one

purple distance we could

pick as it winds upwards

through the hills between the "lion & the lamb" on the left
& Great Sandal on the right. They were beginning to

burn the yellow bracken there already & we could
see a blue column of smoke winding away in the
still autumn air. On our homeward way we

passed one of the prettiest
little cottages I have seen about
here. It was whitewashed
standing a little way up
the hill, commanding an

exquisite view over the
Langdales. Its little garden
on the slope was crowded
with a luxuriant growth of
old fashioned flowers - dahlias,
red, purple & yellow, tan white & magenta phlox
and here & there a pale faintly purple colored
hydrangea - such plants as are only seen as
a rule in the "un-gardened" part of a fashionable
garden & which had grown so tall during the
damp weather that they almost blocked the
lower parts of the window.

Oct 4th Our long walk yesterday had
tired us a little so we only
walked to Windermere today
& gathered Fig-wort seed
& enjoyed the view of the
Langdales. I always like
them best from Windermere



Orange
Stevenia



Oct 6th Scrambled about in the fields behind Springfield in search of acorns. It is very odd, but we could only find two (though we looked most carefully), oak. trees are plentiful. We were fortunate in finding two beech-nuts nestled inside their (then) dying bracts, which are as soft as silk. We saw a kind of Michaelmas Daisy growing on both sides of the Rockay just before Peeler Bridge is reached - but I fear it must have been only a vaguer from someone's garden for the Bohay books say the Sea Star-wort is the only wild Michaelmas Daisy we have. We brought in some lovely yellow bracken leaves, red brambles & figwort & Miss Hodges brought us in the afternoon some canary seed to paint which I have put on the opposite page. The little moss or fungus that is on the back of this was formed by one of the children - I have not yet found out its name, its history.

Oct. 7th The air seemed rather oppressive today so we only walked to the piece of ground above Stot

Chyll, but on the way I picked the yellow Balsam for the first time, as it is a rare plant only growing in mountainous districts. I was very pleased to see it. There was a great deal of it growing here. The wall was companion pulled it up to show me the & the nodes that swell at each. The flowers grow very curiously stalk running along & underneath of the leaf until it reaches of the leaf where it drops about & bears at the end the pretty I also found the white Hemp Nettle - The other Nettles went to Turkey flowers still blossoming. I have not yet seen ^{here} hemp. Hemp - Plantain, Knapweed, Hawkweed, Self-heal, Aeon, Wall Lettuce, ivy, leaved toad-flax, Welsh Poppy, Goldenrod - Scabious Dwyl's Bit & Shepherd's Ragwort & Meadow Ragwort, blackberry, angelica & Hag-weed. I meet almost daily in my walks. 8th Today real wild raspberries were brought in such fine ones from the fields by the Rockay.

42. An enormous Lady's Mantle leaf that the autumn had painted all sorts of gorgeous colours - leaving it its original summer green round the edge & flanking into yellows & reds towards the base. The bases are crowded with bracken, hips & haws, blackberries & raspberries - a yellow poppy here & a violet Knapweed there, blending with others & forming a perfect feast for the eye to regale itself upon -

11th. Today I went to Rydal Terrace. It was such a very still, sunny misty autumn day that we thought it a pity to spoil the harmony of a scene by hurrying. So we sat down on some stones on Waterhead & looked at the lake. It was clearer than I have ever seen it - & the shadow of the mountains & the trees clearer than the realities. We only picked bracken & Bird Cherry.

The latter has the most wonderful colouring. I could not help trying to paint it - (see next page) because we never see it in the South. but I cannot manage to show the pinky-red of the leaves when the sun shines through them - nor the graceful droop of the whole tree shedding showers of its beauties with the slightest breath. The Bird Cherry near Milner Bridge is most disappointing. It is as green as grass still & shows no sign of changing.

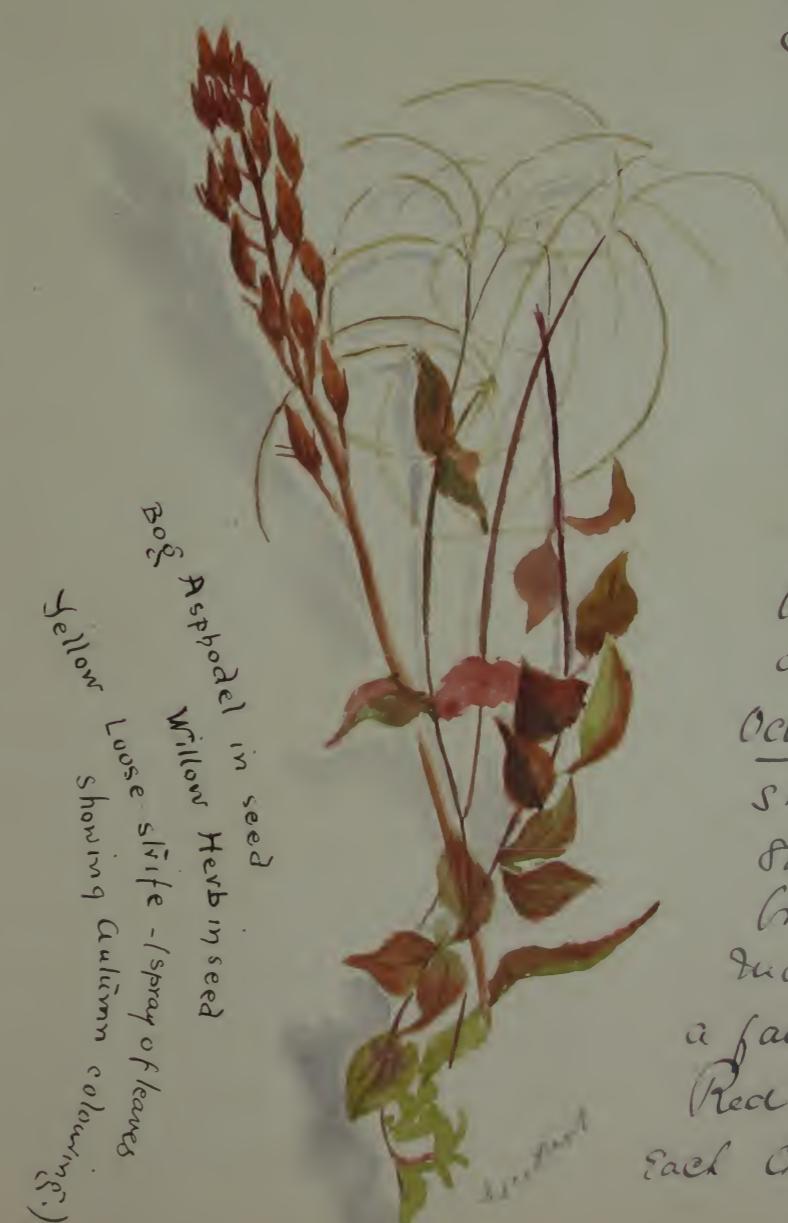
12 Oct. Went to see how Windermere looked in the autumn - Another typical day - all the mountains wrapped in clouds dark at the top & lighter as they rolled gradually down - softening all the beautiful colouring below - The sun

sent a shaft of light between two clouds across

the very still lake & we saw the water shimmering & glistening.

Oct 15. It is much colder. The wind has been very busy in the night & has blown quantities of leaves off the trees. Some branches are already bare -

Oct 16th Still cold & showery. but the sun gleams very brightly most of the morning. We saw a faint rainbow on Redescale today - each change of the clouds



Sept 16

Sept 16



Picked from a tree on
Nabs Scar -

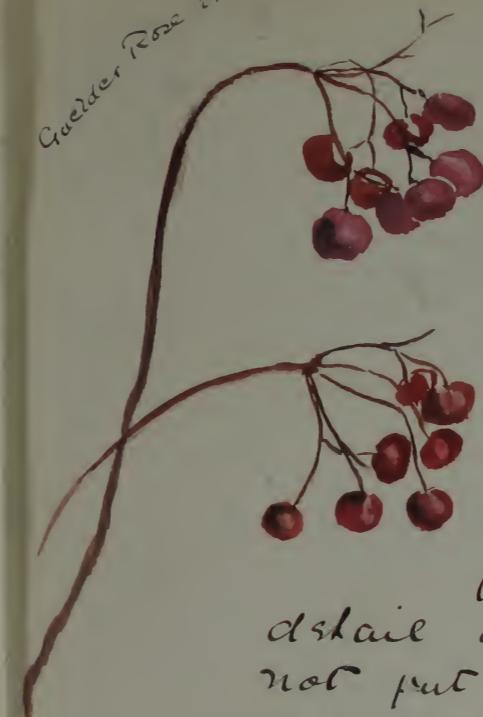
Wild Cherry leaves
in October
R. S.

Behind & over the mountain seems to make a grander picture than the last. We walked below Tinkers Crag today & two very fine strawberries were found - I saw a little weak looking harebell & it had the same helpless look about it that the wasps have just now. Some red Campions were lingering about, wood betony, herb Robert, white hemp nettle & self heal were all still in flower. I picked a handful of seeds. The mountain-sage, the legumes of the goat broom, the pretty curly Willow-herb, the hemp dead-nettle - the purple loose-strife - the goldenrod with little fluffy balls of pappus - a very dilapidated Water avens seed showing its little hooks & that is all. One stumpy little oak-tree was bearing quantities of spindle-galls - as well as two Cherry galls & an oak-apple. Coming back to Kelsick we found bunches of the American Hawthorn in fruit, but of course that is not indigenous. I forgot to say the Meadow-sweet was still out - I do like its little curly fruits - but I fear they are too difficult to paint. The Knapweed fruit I brought as well & the capsules of the Campion - that are shaped so prettily.



Marsh Hawkbit, seed
Silky Bent Grass

Gelder Rose fruit



Perhaps it is the fault of the Nursery Rhyme - *Curious Willie* - that one never can help taking the part of the fly when one sees it in the clutchers of a spider. I was quite pleased when Miss Gilbert poked up a pretty yellow & brown one with a long & made him release his hold. We were walking by the Brachay & had collected about 30 fruits in half an hour but as they will all be found in detail at the end of the book I will not put them here. The brooklime, buttercup & sow-thistle were in flower, but there's broas were launcing rather forlornly. I found some pretty clumps of lung on the rocks in the stream - but the pink clusters of flowers had turned quite crisp & dry. Coming home we searched under the beech-trees at Craft for snail's shells & we rewarded by finding one tiny laminated shell, too small to paint, & one tiny round flat shell that looked as if it might belong to the hairy species. The rosette buds had already formed in the axils of the leaves of the trees & if this extremely close weather continues I shan't wonder if they are deceived into thinking spring has come again.

A Raspbeare leaf
(the fruit of the Rose)



Nov. 1. My diary has been
away on a visit so there
will be a fortnight's
space between this note
& my last - a space
that a little lines of
poetry however
might well
have filled.
"Raindrops
patter on
the walls."

'Drearly face the showers
'Lifeless droop the broken stalks
'Over the scattered flowers.'

This added to the misty night caps on the mountains
is the story of the last week for very nearly 14 days.
The Stock is raging like a miniature Tiber & looks
quite launy. Some of the sledgers went to see the falls
yesterday & said they had never been so fine this year.
I shall try today - but probably the best will be over.
Springfield garden has a little lake in the middle of it
& the fields beyond are flooded. I do not know where
all the birds are. but 6 robins & a wagtail or two
are about all & i have noticed going to & fro.

Nov. 7th
There are
described.
The sycamore
over the stock
had two little
green leaves
on it today -
new ones & the
whole tree looks
quite ready



to burst into its summer gale at a day's
notice. There are spindle berries above - quantities
of them were found two weeks going to Tunkers
Crag. The fruit remained long after the leaves had
fallen. It is most pretty & interesting - & will make
an important addition to the list of autumn fruits
described further on - but I found them most difficult
to paint & fear they hardly look like what they are.

Nov. 9th. Walked to Rydal in the softest rain -
The grasses all dead & drooping on the edge of the
stone walls were glistening like diamonds with millions
of rain drops - the tall dead manes - ran hawk - weed
made beautiful straight sprays behind. I thought some
of them in to paint but they are not so pretty out of the rain

Nov. 10th

An opposite day.

I am now off
to find something
fresh - In the
little copse
to the left of
Slack Gill I
found blackberry
leaves still

quite green &
quite big bunches
of blackberries -

also a strong
intercept that might
have belonged to the
spring & two pink
Campions. I heard
that primroses were
seen today in some
garden & the lilac buds
are growing quite green -
The robins look very
happy & pugnacious - the
wind is quite chirpy -

I noticed two large herons flying
in a slow & stately way over Rydal,
their wings showing distinctly against
a deep stormy looking cloud -



The Wild Plum
Nov. 10th

21 Dec 1862

Nov. 20. Went to Loneood.
It was a lovely afternoon
after the recent rain
the path was in most
places through the wood
an inch deep in water -
We found several lovely
red in leaves. A spindle
berries were hanging
on the trees. The wood
Bistort & Campion were
still in flower - the keep
of the Sycamore were
hanging down & brown
on the bare branches &
the hips & haws were
turning a dark red -
some already quite black.

Nov. 28th Nature seems to
have been very quiet lately.
Nothing is stirring except perhaps the birds - but it
is so mild that even they do not seem disposed
to their usual winter friendliness - The Chaffinches
& Robins come to our window - (if we put crumbs out)



Caught in Brit. Guiana



21 Dec 1862

The blue-lets
are very noisy
in the front gardens.
Also the owls are
noisy at night.
Today we went
up the Kirk-stone
Pass road. It is
between two stone
walls so there is
not much
investigation by the road-side
but we sheltered the trees above
our heads. The resting-places of
the which-sen, oak, chisel & sycamore, are all
quite different in character - but require pictorial
illustration which I hope to give at some future
time. The hair-grass was growing on the wall -
but I was surprised to find it had a name.
Somehow one passes those common things so
often that one forgets they can be in a botany
book. The rescue grass was another common grass
that I had not heard named before. In a larch
tree we found a big larch gall that looked from
below like a squirrel's nest. I think these galls
are most various & difficult. The birch trees near
the water looked quite tortured.

Natural History Notes.

11 p55 pheulz

Mammals (from a Latin word meaning the organ that gives milk), are animals that give suck to their young. Many are now extinct in the British Isles, but there is a large number left though these are comparatively small.

The Fox & Badger are the largest - the others are Bats, Hedgehogs, rats, voles, stoats, weasels, Larks, rabbits, moles, shrew-mice, mice, otters, martins, squirrels ^{& how about Red Sow} _{is Huttonian battle}

Bats There are from fifteen to twenty species of natural bats. The Common Bat & the Great Bat are those most generally known.

If these are carefully examined it will be seen that there is considerable difference in the appearance, but not in the structure. The wide mouth, tiny sharp teeth, & wide-spreading wings are alike. The wings are stretched out like hands joined by a thin fine skin. The thumb is furnished with a hook; the toes are free & have also hooks to enable the bat to hang head downwards. The ears are large & sensitive. The outer ear or tragus only is exposed when resting

the outer ear being turned back & laid flat upon the head. The bat is eminently fitted for doing in the evening what the bird does during the day - viz. to clear the air from insects. At night innumerable tiny moths come out, so small that they are called the micro-lepidoptera, & so numerous that they have been known to devour whole trees. These are easily snapp'd up by the Bariformis its chief food.

The large bat eats larger food e.g. beetles & CockChafers.

The young ones are born singly or in pairs - at first they cling to the mother, but they soon learn to fly. They are born naked & much resemble young mice.

The large Bat is called the Noctule. The one shown in illustration was found caught in a trap by the edge of a pond where it had evidently come to drink.

The small Bat Pipistrella was found hanging dead & dry in the corner of a barn.

The habits of bats are known, old fox, down trees & almost any sort of cavity can

54 The shrill cry is sometimes pitched so high that it is not easy to hear it.

The wings of the large bat measure about 16 inches across. Other kinds of bats are
The long-eared Bat
The brown Bat
The greater mouse-eating Bat
The greater mouse-eating Bat



Hedgehog.

In Lincolnshire the hedgehog is called the prickly urchin, possibly from the Lat. *ermiaceus*.

In Devon: it is the apilace or hedgehog.

It is also known in some places as the Vassapeg or Furre-pig. The upper part of the head doesn't

project over the lower in the same way as a pig.

Hawks, large owls, falcons attack hedgehogs

piercing the prickles & killing them through the head.

The long snout is of great use in grubbing for food

e.g. worms, wood-lice, cock-chafers, frogs etc.

When first frightened the hedgehog will run for cover, but if there is none to be found it will roll

itself up, by drawing the loose skin of its neck over

its head like a hood. This makes the prickles

stand upright, instead of lying smoothed down towards

the tail. Each spine is bent slightly at the end

nearest the skin & is fastened into the skin by a

little knob resembling a pin's head, so that it is impossible to pull it out. The claws are very sharp enabling it to climb up trees & walls. When it reaches the top of a wall, it curl's itself up & falls the prickles preventing any injury. The hedgehog is a hibernating animal. It lays up no store of food, but goes to sleep about the end of September.

Rats.

The English black rat has almost been exterminated by the brown Norwegian rat, which most naturalists however think has travelled in ships from Russia. The female rat has a family of 13 or 14 about three times a year; these again have families in six or seven weeks. Lincolnshire used to be so infested that they were killed & carried away in timber loads. The mother makes a nest of soft wool or hay for its litter & when disturbed will carry them away in its mouth as a cat does. They are very

careful of their old & feeble if provisions are plentiful, if scarce they strong fall upon the weak & kill them. Rats are remarkably clean animals.

They have been seen to go down to the ponds & there wash & comb themselves. It is a fact that

if a slack is taken possession of by mice, rats will not go there - This may possibly be because

the mice are so much dirtier

1109 p.m. 162

Rats frequently migrate in large companies, going from one neighbouring farm to another. The teeth, like those of the rabbit, continue growing from the root - if the companion teeth in the upper or lower jaw be lost, its fellow will go on growing & gradually cause death, unless it becomes fixed outwards. Rat-traps should be set in the run of the rats. A good trap is a tub half full of water with a balancing lid. The rat will run over it, fall in & be drowned. This is one of the most painless ways of killing it, but it is better to have a good rattling trap - they grip the animal by the back of the neck & death follows instantly.

Vole. This little animal is commonly & wrongly called the water-rat. It is very dark-brown, almost black, above, white underneath. It has a short tail, long body & blunt nose; it may be briefly described as something between a rat & a mouse. The teeth do not hinder, lock & the jaws move to & fro showing that it belongs to the gnawing & nibbling family (*Rodentia*). There are two kinds of voles - one the semi-aquatic, or the land vole. They feed upon vegetable food. The field vole (*arvicola agrestis*) burrows under the soil for the newly-sown corn, & in the winter inhabits necks & barns for the same purpose. For this reason it is a great enemy to the farmer & its increase is due to the destruction of birds. It has been stated that every acre is worth £5 to the nation for destroying animals like voles. In the spring of 1876 Wall district

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between England & Scotland, which is used for grazing ground, for sheep was completely destroyed by voles. The shepherds destroyed as many as they could but were unable to diminish them sensibly.

Water Vole (*Arvicola amphibius*). This is often called the water rat. It is only a vagrant as is shown by its teeth. It feeds on aquatic plants and can masticate the bark of the common rush. The finely cuticle is not nutritious but it serves them to keep down their teeth. The water vole is found near clear streams & their banks may be seen full of the holes which it has tunneled. In many ways it is nearly allied to the beaver. It is an underground dweller & a complaint against it is that it burrows the banks of the streams. This may be true but it is otherwise very harmless.

Common Weasel. The weasel is gifted with a little snake-like body, a long powerful neck & very sharp teeth. It eats animals as large in comparison to ~~itself~~ as an elephant is to a dog. It has even been known to attack men & always flies at the throat of its opponent. The skull of a rabbit which has been killed by a weasel will be seen on examination to be bored with two tiny holes. The weasel can spring to a great distance & can climb easily. Its bite is fierce & deep & five or six weasels uniting will easily overcome their enemy. It eats various animals, chiefly mice, for which the farmer is very grateful to it, but it also carries off an occasional

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chicken, duckling or pheasant. It is a great hunter, hunting its prey with eyes, ears & nose & if it loses its scent it quarters like a dog. Its dwellings make the holes in hedges which in Suffolk are called 'smies'. It has been tamed but the evil colour it assumes is a great disadvantage. The weasel belongs to the same tribe as the Pole-cat, ferret, martin & stoat.

Moles.

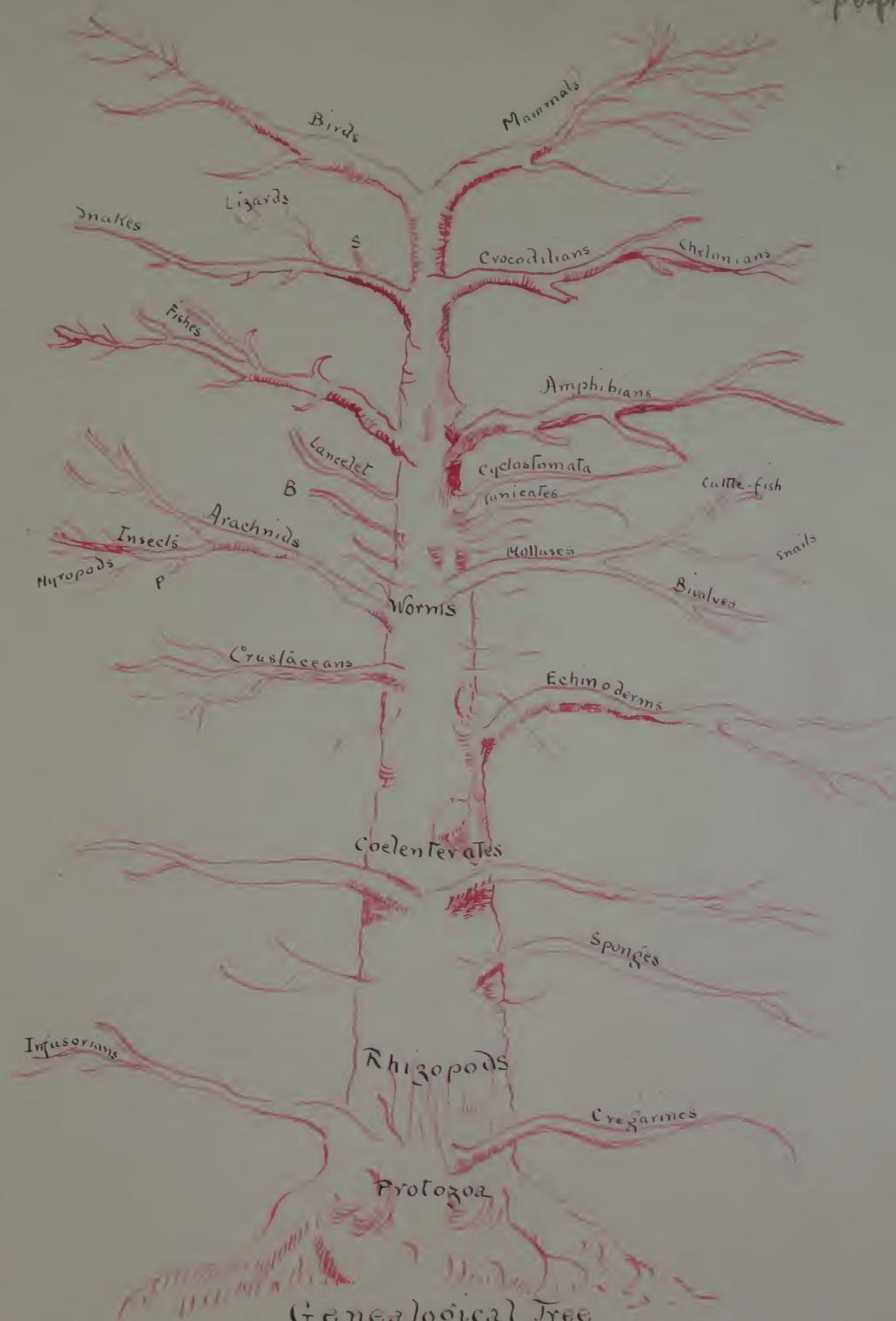
Moles belong to the insectivorous mammals with shrews & hedgehogs. They all have pointed teeth something like the Canivora & feed upon worms, grubs & insects. The fortress is generally under a hollow tree or some place of bat desecration. It is probably used by the moles as a place of defence. Mole-hills are not the nests of moles, but are heaps of earth thrown up by them as they hunt for worms. The lower gallery of the fortress has five passages leading into the upper & smaller one & the latter communicates with the central chamber by three tunnels.

As a rule the burrows run horizontally near the surface, but this depends upon the movements of the worm. In very cold or dry seasons the mole would have to dig deeper. The skin of the mole's skull is very tough with two large bones on each side.

The Common Shrew may be known by its very long snout, long body & short legs. In dry weather shrews may be seen lying about dead all over the fields. The cause of this is a displaced vertebra. It usually has a family of about 6 in little nests of grasses & leaves. The water shrew is very pretty & looks when moving about like a line of quick-silver. The common shrew is very dark above & has a white breast.



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Genealogical Tree

The small classes in the centre indicate the classes of worms. The letters B, P, S indicate the positions of Peripatus, Balanoglossus, Sphenodon or Halleria respectively.

Sea-side Objects.

Up B3pneul62

Hanging to the pinion shaped sea-weeds, rarely
unclosed by the tide.

The Briny Ocean

I



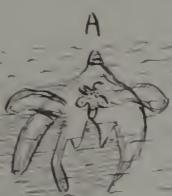
Infancy of feather star

A. The jelly animal swimming with its lashes.



B. Fixed animal from which the
feather star afterwards breaks off.

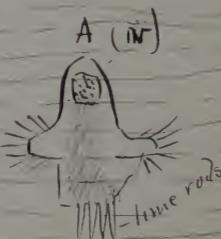
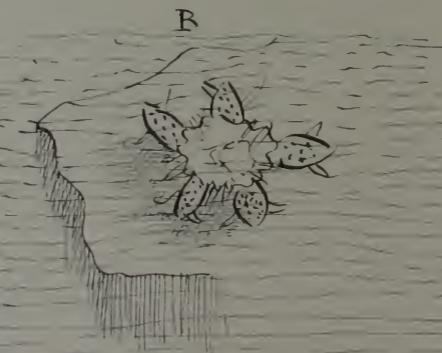
II



Infancy of
Brittle star.

A. Jelly star
animal
while star
fish forms
inside.

B. The young
brittle star
settled on a
rock.

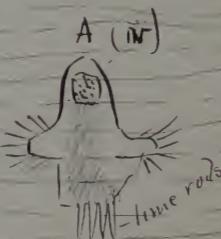


Common Star-fish

A. Jelly animal

B.

C. Common
Star-fish.



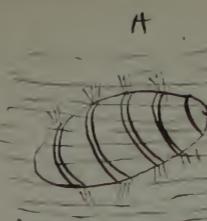
IV. A. Jelly animal with lime-rods.

B. Young sea urchin.

V.

A. Jelly
animal

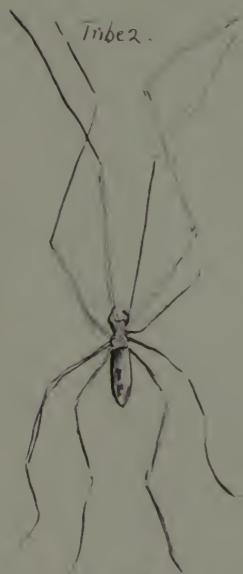
B. Young
Cucumber



Up B3pneul62

Tribe 1. *Scinaculina*

Oonops pulcher (length $\frac{1}{12}$ inch)
Fam. Dysderidae



Pholcus phalangioides
Fam. Theridiidae Tribe 2



Epeira diadema
Fam. Epeiridae



Agelenopsis labyrinthica
Fam. Agelenidae Tribe 2

Tribe 2.



Dolomedes mirabilis
Female with eggs (enlarged)

If you wish to live & thrive
Let a spider run above

Tribe 2. *Octonoculina*